

**IN THE CLAIMS:**

Please amend the claims as follows:

1. to 24. (Cancelled)

25. (Currently amended) A method of distinguishing different-sequence polynucleotides electrophoretically in a non-sieving medium, comprising forming ~~one or more~~ a plurality of different-sequence ~~polynucleotide(s)~~ polynucleotides, each different-sequence polynucleotide containing (i) a detectable reporter label and (ii) an attached polymer chain which imparts to each different-sequence polynucleotide, a distinctive electrophoretic mobility in a non-sieving matrix, fractionating said ~~polynucleotide(s)~~ polynucleotides by capillary electrophoresis in a non-sieving matrix, and detecting the fractionated ~~polynucleotide(s)~~ polynucleotides.

26. (New) The method of claim 25, wherein the polymer chains have substantially the same lengths, and said different-sequence polynucleotides have different lengths.

27. (New) The method of claim 26, for sequencing DNA by dideoxy chain termination, wherein said different-sequence polynucleotides are formed using a 5'-primer to which said polymer chain is covalently bound.

28. (New) The method of claim 27, wherein said different-sequence polynucleotides terminate at their 3'-ends with dideoxynucleotides that are covalently labeled with spectrally resolvable dyes effective to distinguish the 3'-terminal nucleotide of each different-sequence polynucleotide.